

RUNNING TITLE:

GAS GANGRENE IN PERINEAL ABSCESS

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PERINEAL ABSCESS SECONDARY TO GAS GANGRENE: USE OF HYPERBARIC
OXYGEN AS A THERAPEUTIC ADJUNCT IN A CASE

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ABSTRACT

A perineal abscess was encountered in a patient presenting with lower urinary tract obstruction. Further spread of the abscess with gas formation was due to *Clostridium Welchii*.

Treatment included hyperbaric oxygen. Long term follow-up reveals no significant complications.

A 71 year old white Caucasian male presented with an acute history of urinary difficulty associated with a swollen tender mass in the perineum. An indwelling catheter was inserted to relieve acute urinary obstruction.

Physical examination was not contributory except for an oval swelling measuring 3 x 7 cm. in the mid-perineal area. Rectal examination revealed an exquisitely tender, deep mass surrounding the left pararectal area.

Impression of all observers was the presence of an anorectal abscess extending to the perineum.

Hospital Course: Because of poor drainage, in spite of wet dressings and heat over the abscess, he was taken to the operating room the next day for incision and drainage of the abscess. The operative diagnosis was a prostatic abscess with extension into the penile shaft, scrotum, suprapubic region and peri-rectal areas.

On the first post-operative day, wound dressings were noted to have a strong fecal odor. Scattered crepitation in the perineal area was noted. Gram stain of the abscess revealed gram positive rods. Several days later, the wound culture was reported positive for *Clostridium Welchii*.

The evening of the second post-operative day was remarkable for the patient. He became toxic and his sensorium was generally clouded.

Initial treatment for gas gangrene consisted of polyvalent gas gangrene antitoxin, 50,000 units, Chloramphenicol, Streptomycin and Penicillin in therapeutic concentrations. The necrotic areas appeared to have deep areas with moderate crepitation. The patient was acutely ill.

The following morning (2nd post-operative day) he was treated with hyperbaric oxygen - 2 atmospheres absolute over a seventeen (17) hour period. Figure 1.

INDIVIDUAL TREATMENT CYCLE IN CHAMBER

<u>Minutes</u>	<u>Gauge Pressure</u>	<u>Absolute Pressure</u>	<u>Oxygen Concentration</u>
60	14.7 PSI	29.4 PSI	100%
20	14.7 PSI	29.4 PSI	Air (20% O ₂)
60	14.7 PSI	29.4 PSI	100%
20	14.7 PSI	29.4 PSI	Air (20% O ₂)
30	4.5 PSI	19.2 PSI	100%
120	0 PSI	Surface	Air (20% O ₂)

Above cycle was repeated twice more for a total of three (3) treatment periods.

The patient made a remarkable recovery. Further wound debridement was carried out on the third and seventh post-operative days. Figure 2. Secondary wound closure was performed five (5) weeks after admission.

Six (6) weeks after admission, the enlarged prostate was removed by the trans-urethral route. His post-operative course was uneventful.

He was seen one year following his original admission with no urological complaints.

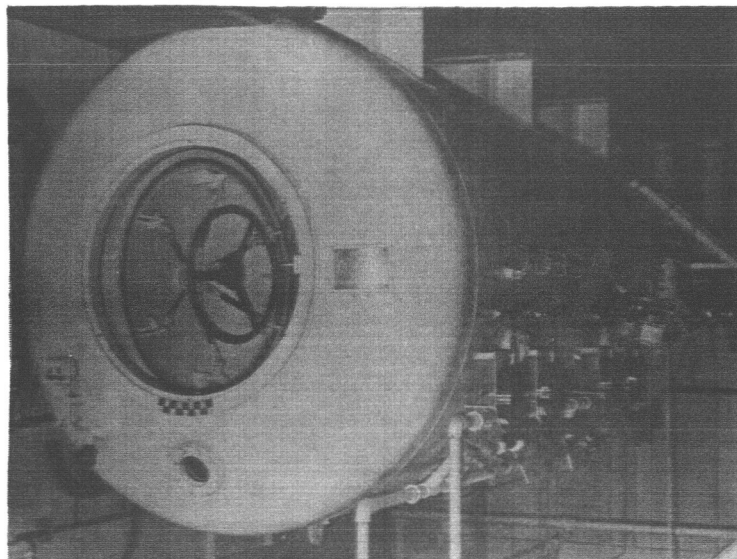


Fig. 1

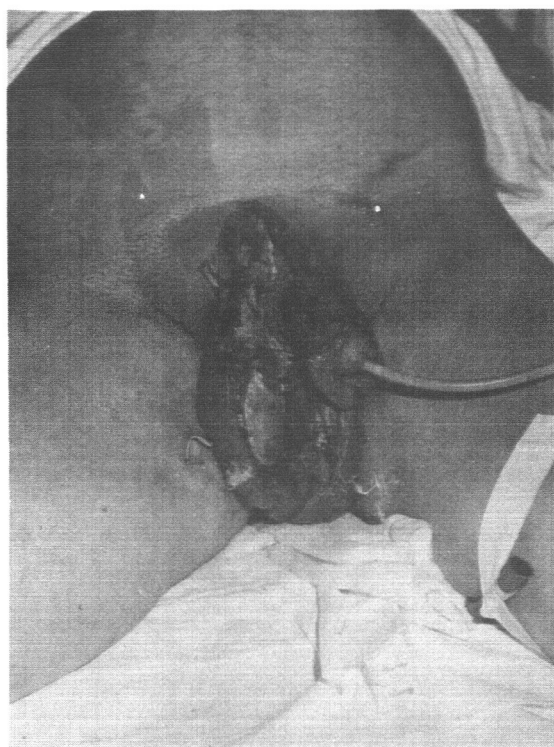


Fig. 2